

Claims

1. An actuator for actuating a gear shift mechanism in a vehicular transmission system, the actuator comprising:

5 an actuator body having an opening for the transport of fluid into and out of the actuator body;

an actuating member within the actuator body, moveable by the fluid; and

10 a control device operable to control independently the pressure of the fluid and the flow of the fluid.

2. An actuator according to claim 1, wherein the control device comprises a proportional flow control valve to regulate the flow of fluid into and out of the actuator body.

15 3. An actuator according to claim 1 or 2 wherein the control device comprises a proportional pressure control valve to regulate the pressure of the fluid into and out of the actuator body.

20 4. An actuator according to claim 1, 2 or 3 wherein the control device is operable to control the pressure of the fluid in dependence on a pre-defined profile of pressure with respect to position of the actuating member.

25 5. An actuator according to any preceding claim wherein the control device is operable to control the flow of the fluid in dependence on a pre-defined profile of flow with respect to position of the actuating member.

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6. An actuator according to any preceding claim wherein the control device is operable to control at least one of the pressure and flow by means of a current signal.

5 7. An actuator according to any preceding claim wherein the actuator is a hydraulically operated actuator.

8. A method of controlling an actuator for actuating a gear shift mechanism in a vehicular transmission system, the actuator comprising an
10 actuator body having an opening for the transport of fluid into and out of the actuator body and an actuating member within the actuator body, moveable by the fluid; the method comprising:

independently controlling the pressure of the fluid and the flow of the fluid.

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9. A method according to claim 8 further comprising controlling the pressure of the fluid in dependence on a pre-defined profile of pressure with respect to position of the actuating member.

20 10. A method according to claim 8 or 9 further comprising controlling the flow of the fluid in dependence on a pre-defined profile of flow with respect to position of the actuating member.

11. A method according to claim 8, 9 or 10 further comprising controlling at
25 least one of the pressure and flow by means of a current signal.

12. A method according to any of claims 8 to 11 wherein the fluid is liquid.